

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of compressing data in a graphics processing system comprising:

5 defining a plurality of tiles of data;

defining a tile format table, separate from data storage of said tiles, containing a status entry for each of said plurality of tiles;

compressing [said tile when said compressed tile is smaller than said tile] each of said tiles, wherein each tile is compressed if it is determined that compression results in a smaller tile size;

setting said status entry for each of said compressed tile tiles in said tile format table, wherein said status entry indicates the memory size of each of said tiles after compression, with a full size indicating a non-compressed tile;

storing said compressed tile tiles in a memory.

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2. (original) The method of claim 1 wherein said compression is lossless.

3. (original) The method of claim 1 wherein each of said tiles comprises a cache line.

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4. (currently amended) The method of claim 1 wherein tiles read from said memory are decompressed when said status bit entry indicates that said tile is a compressed tile.

5. (currently amended) A method of compressing color pixels in a graphics processor system comprising:
- defining a plurality of tiles of data;
- defining a tile format table, separate from data storage of said tiles, containing a status
- 5 entry for each of said plurality of tiles;
- compressing [said tile when said compressed tile is smaller than said tile] each of said tiles, wherein each tile is compressed if it is determined that compression results in a smaller tile size;
- setting said status entry for each of said compressed tile tiles in said tile format table,
- 10 wherein said status entry indicates the memory size of each of said tiles after compression, with a full size indicating a non-compressed tile;
- storing said ~~compressed tile~~ tiles in a memory.

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6. (currently amended) The method of claim 5 wherein each of said compressed tile
- 15 tiles is compressed using one of a plurality of compression methods.

7. (currently amended) The method of claim 6 wherein each of said compressed tile
- tiles includes a value identifying the compression method of said plurality of compression methods used to compress said compressed tile.

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8. (currently amended) The method of claim 6 wherein each of said tile tiles is comprised of pixels having pixel color components.

9. (currently amended) The method of claim 8 wherein one of said compression methods comprises entropy encoded differences between adjacent pixel color components, in which unique color or component values in a tile are extracted and sorted by minimal difference, are entropy encoded, and are indexed per pixel in said tile.

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10. (original) The method of claim 9 in which the assignment of entropy codes per tile is based on the frequency of occurrence of difference values within said tile.

11. (original) The method of claim 10 in which multiple component difference codes 10 are combined into a single code per pixel.

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12. (canceled)

13. (currently amended) The method of claim 12 in which said unique colors and 15 components are sorted in a manner that minimizes a size of pixel difference encoding and minimizes a size of color and component difference encoding.

14. (new) The method of claim 1 wherein said status entry further indicates the validity of data in said tile.

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15. (new) The method of claim 5 wherein said status entry further indicates the validity of data in said tile.

SUMMARY OF INTERVIEW

An interview was conducted with the Applicant's representative David Chan (Reg. 51,540), Examiner Le and Examiner Au via telephone on December 4, 2003. Claims 1, 5, 9, and 11 were among the claims discussed. No agreement was reached on these claims.

5 Regarding claim 1, Applicant stated during the interview that "tile format table" was not taught in the Bhargava reference and cited that neither FIG. 13A nor col. 10 lines 10-17 refers to a "tile format table." More specifically, Applicant stated that FIG. 13A shows the transmission format used for transmitting an entire frame (col. 13, lines 31-34). As such the "HEADER" label in Fig. 13 refers to header information for an entire frame, not an individual tile as alleged by the
10 Examiner. The Examiner countered that FIG. 14 could be seen as a tile format table.

Regarding claim 9, Applicant stated during the interview that, in Bhargava, Huffman encoding is performed over the entire aggregate of tiles and sub-tiles. This is because by the time Bhargava applies Hoffman encoding (step 120 in Fig. 12), all the values within each individual tile and sub-tile in Bhargava have already been equalized by STC. Such tiles contain
15 "no differences between adjacent pixel color components," a limitation in claim 9. So it is impossible to apply Huffman encoding to "differences between adjacent pixel color components." Examiner maintained that component 120 of Fig. 12 in Bhargava teaches the limitation as stated in claim 9.

Regarding claim 11, Applicant explained during the interview again that, in Bhargava,
20 the small value differences are equalized within an area of the frame. Figs. 1-3 show that small differences among the pixels are equalized so all pixels within a difference threshold get the same values (result shown in Fig. 3). Applicant also stated that, in contrast, the present invention teaches combining "multiple component difference codes" into "a single code per pixel." For example, the difference in the Red component, difference in Green component, and difference in

Blue component within the same single pixel are combined to one single difference value.

Unlike Bhargava, this combination exists entirely within a single pixel and does not involve equalizing the pixel value in combination with other pixels. The Examiner maintained the initial rejection still stand on the proposed claim amendments and further amendments are needed to
5 distinguish the present invention from the prior art.